

groove, the first visible abdominal sternite medially elevated by lateral depression; scutellar tubercles obscurely formed, as nodules, set wide apart; lateral margins of scutellum corrugated, median dorsal foveation smooth and narrow; mesonotum not exposed; pronotal median foveation confluent with the posterior one; lateral inner foveation not confluent with any outer foveation cum groove, confluent with posterolateral depression of posterior lobe of pronotum; dorsum of fourth abdominal segment longitudinally rugose, all the rest of the segments transversely rugose; all connexival segments rugose.

Type Information: *Holotype* FEMALE, Serial No. 51. *Paratype* a single male, both pinned specimens

deposited at present in the reduviid collection of the Division of Entomology, Department of zoology, Madras Christian College, Tambaram, Madras, India.

Collection Information: *Holotype* and *Paratype* were collected from underneath a boulder in Manimutharu, Tirunelveli District, Tamil Nadu, on 10.01.1988, at elevation 75 MSL, temperature 29°C and humidity 58%.

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HYPSELOBARBUS KURALI (PISCES: CYPRINIDAE) A NEW LARGE BARB FROM THE SOUTH WESTERN RIVERS OF PENINSULAR INDIA¹

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(With a text-figure)

Hypselobarbus kurali is described as a new species of large barbs from the South-Western rivers of Peninsular India. It is characterised by 4 barbels, a weak articulated last undivided ray with nine branched rays in the dorsal fin, 41-43 scales along the lateral line, 3½-4½ rows of scales between LI and pelvic origin; silvery with somewhat greyish back, a deep black bar behind the gill opening and the caudal tipped black. The identity of two cyprinid species, *Cyprinus curmuca* Hamilton and *Barbus kolus* Sykes from the east flowing rivers of the Peninsula considered as distinct species is re-examined. *B. kolus* is considered a synonym of *H. curmuca*.

INTRODUCTION

Hamilton (1807) described *Barbus curmuca* from Vedawati river of the Tungabhadra drainage in Mysore, with two barbels, 39 scale rows along the

lateral line and a weak and articulated last undivided dorsal ray. Sykes in 1840 described *B. kolus*, also with the same characteristics from Deccan. Specimens from South Canara with four barbels and the caudal tipped with black, Day (1878) considered as a local variety of *B. curmuca*. In a recent fish collection made by the senior author from different

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TABLE I
MORPHOMETRIC DATA OF *HYPSELOBARBUS KURALI* FROM DAKSHIN KANNADA AND KERALA

| | Dakshin Kannada with tail tipped black n = 14 | | | | Kerala | | | |
|--|---|-----------|------------|-----------|----------------------------------|-----------|-----------|-----------|
| | with tail tipped black n = 19 | | | | with plain caudal tips n = 14 | | | |
| | 120.0-270.0 | | 78.0-175.0 | | 94.0-196.0 | | | |
| Standard length (mm) | in SL | | in HL | | in SL | | in HL | |
| | Range | \bar{x} | Range | \bar{x} | Range | \bar{x} | Range | \bar{x} |
| Head length | 3.37-3.80 | 3.49 | 3.31-3.81 | 3.63 | 3.23-3.82 | 3.56 | | |
| Body depth | 3.28-4.00 | 3.69 | 3.64-4.39 | 4.08 | 3.76-4.83 | 4.35 | | |
| Predorsal length | 1.91-2.25 | 2.03 | 2.02-2.16 | 2.09 | 2.05-2.56 | 2.20 | | |
| Postdorsal length | 1.67-2.10 | 1.85 | 1.74-1.97 | 1.86 | 1.78-1.99 | 1.90 | | |
| Length of dorsal fin | 3.64-4.80 | 4.24 | 4.23-5.17 | 4.57 | 4.22-5.27 | 4.71 | 1.24-1.41 | 1.32 |
| Length of pectoral fin | 4.22-5.00 | 4.60 | 4.84-5.57 | 5.15 | 4.34-5.10 | 4.78 | 1.20-1.47 | 1.35 |
| Length of pelvic fin | 5.28-6.22 | 5.66 | 5.26-6.12 | 5.73 | 5.11-6.24 | 5.70 | | |
| Length of anal fin | 3.65-6.00 | 4.60 | 4.81-6.32 | 5.69 | 4.11-6.37 | 5.24 | | |
| Length of caudal fin | 2.79-4.55 | 3.44 | 2.93-3.89 | 3.36 | 3.13-4.45 | 3.57 | | |
| Distance between pectoral to pelvic origin | 3.33-4.02 | 3.75 | 3.54-4.40 | 3.89 | 3.30-4.29 | 3.83 | | |
| Distance between pelvic to anal origin | 3.40-4.21 | 3.85 | 3.44-4.31 | 3.89 | 3.63-4.54 | 3.94 | | |
| Length of body cavity | 1.89-2.18 | 2.02 | 1.90-2.33 | 2.07 | 1.88-2.24 | 2.06 | | |
| Depth of head | | | 1.44-1.68 | 1.54 | 1.40-1.59 | 1.48 | 1.46-1.71 | 1.58 |
| Maximum head width | | | 1.60-2.00 | 1.85 | 1.56-1.96 | 1.76 | 1.74-2.04 | 1.87 |
| Eye diameter | | | 4.00-5.71 | 4.72 | 3.10-5.36 | 4.13 | 3.47-5.17 | 4.40 |
| Snout length | | | 1.97-2.33 | 2.12 | 2.03-2.58 | 2.34 | 2.11-2.54 | 2.37 |
| Interorbital width | | | 2.42-2.94 | 2.67 | 2.53-3.27 | 2.85 | 2.78-3.39 | 3.17 |
| Length of caudal peduncle/ | | | | | | | | |
| Depth of caudal peduncle | 1.13-1.82 | 1.36 | 1.46-1.8 | 1.63 | 1.37-1.92 | 1.62 | | |
| Height of dorsal/ | | | 1.24-1.60 | 1.38 | 1.27-1.53 | 1.40 | | |
| Base of dorsal | 1.36-1.74 | 1.54 | | | | | | |
| Height of anal/ | | | 1.76-2.14 | 1.91 | 1.59-2.69 | 2.07 | | |
| Base of anal | 1.82-2.65 | 2.56 | | | | | | |
| Predorsal distance/ | | | 0.85-0.97 | 0.89 | 0.73-0.93 | 0.86 | | |
| Postdorsal | 0.83-1.03 | 0.91 | | | | | | |

western rivers of the south western part of Peninsular India, there are a good number of specimens of the present unique species which were earlier referred to as *B. curmuca* by Hora and Law (1941). These, with four barbels, a weak last undivided dorsal ray and 41-43 lateral line scales are described here as a new species of *Hypselobarbus*. Rainboth (1989) discussed the nomenclature problem with regard to the poorly known genus of large barbs of Peninsular India and showed the availability of the name *Hypselobarbus* Bleeker, 1860 for them. *H. curmuca* (Ham.), *H. dobsoni* (Day), *H. dubius* (Day), *H. jerdoni* (Day), *H. lithopidos* (Day), *H. micropogon* (C.V.), *H. periyarensis* (Raj), *H. pulchellus* (Day), *H. thomassi* (Day) are included in this genus. *H. kolus* is considered in this paper as a synonym of *H. curmuca*.

MATERIAL AND METHODS

Material examined in this study are: 33 exs., 78.0-270.0 mm SL, with black caudal tips from Dakshin Kannada and Kerala, and 14 exs., 94.0-196.0 mm SL, with plain caudal tips from Kerala. Measurements follow standard practices except a few as followed in Menon and Rema Devi (1992). Description of the new species is based on the pooled average of all the samples from Dakshin Kannada and Kerala, measured and presented in Table 1. The mean followed by the range in parenthesis is provided.

Hypselobarbus kurali sp. nov.

(Fig. 1)

Barbus curmuca Day (nec. Ham.), Fish. India, 577, pl. 141, fig. 1. 1878.

Barbus (Puntius) curmuca (nec. Ham.) Hora and Law, Rec. Indian Mus. 63 (2): 245, 1941 (Travancore). Silas, J. Bombay nat. Hist. Soc. 49: 674, 1951 (Ponneri drainage system, Anamalai Hills). Silas, J. Bombay nat. Hist. Soc. 50: 326. 1951 (Manimala river, Mundakayam, Peerumed Hills).

Puntius curmuca (nec. Ham.) Misra, Rec. Indian Mus. 57: 153. 1959 (Travancore-Cochin).

Holotype: 270.0 mm SL, Locality: Kumaradhara, near Nettana, Dakshin Kannada, Coll.: Drs. A.G.K. Menon, K.B. Jagadeesh and R. Kannan, 7th January 1992, Reg. No. F. 4003.

Paratypes: A. *With black caudal tips from Dakshin Kannada* - 5 exs., 165.0-240.0 mm SL, Kumaradhara river, Behinilae, near Nettana, 7th Jan. 1992. F/ 4004; 6 exs., 120.0-185.0 mm SL, River Netravadi, near Uppinangudi, 30th Dec. 1991, F. 4005.

B. *With black caudal tips from Kerala* - 2 exs., 81.0-120.0 mm SL, River Achencoil, Quilon District, 6th Nov. 1989; 3 exs., 106.0-175.0 mm SL, Kallar river, near Pullikkayam, 7th Nov. 1989, F. 4006; 5 exs., 112.0-148.0 mm SL, Periyar River at

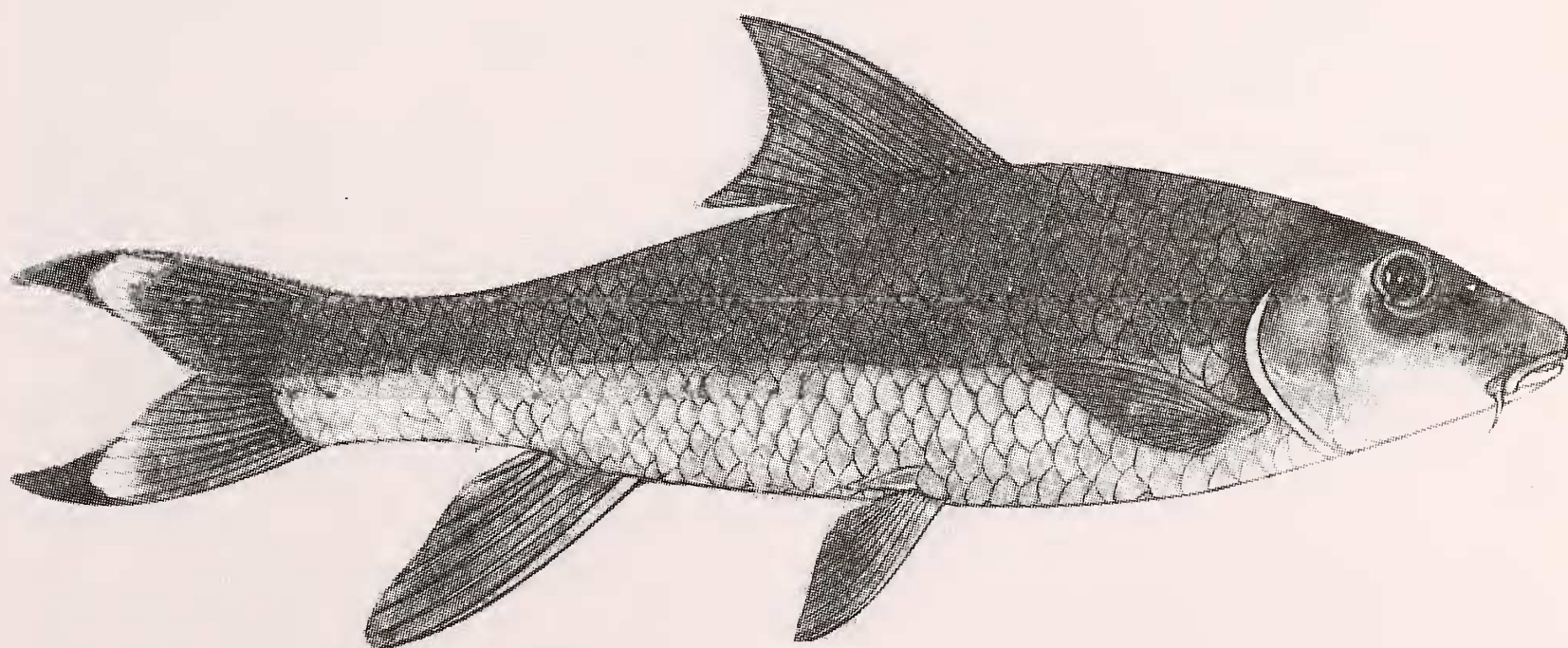


Fig. 1. Lateral view of *Hypselobarbus kurali* sp. nov., 240.0 mm SL.

Neriyamangalam, Iddukki District, 3rd Oct. 1990, F. 4007; 9 exs., 78.0-143.0 mm SL, Manimala river at Mundakayam, 12th Sept, 1991.

C. With plain caudal tips from Kerala - 2 exs., 94.0-101.0 mm SL, Periyar river at Thannikudy, 14 km east of Thekkady, Periyar Tiger Reserve, 13th Dec. 1990, F. 4008; 4 exs., 165.0-190.0 mm SL. Iddukki reservoir, 28th Sept. 1990, F. 4009; 4 exs., 151.0-196.0 mm SL, Cherukotta Oda, a tributary of Periyar River at Cheruthony, Periyar Tiger Reserve, Thekkady, 13th Dec. 1990, F. 4010 and 4 exs., 112.0-145.0 mm SL, Periyar River at Mleppara, 12 km east of Thannikudy Forest Inspection Bungalow, Periyar Tiger Reserve, 14th December, 1990, F. 4011.

Diagnosis: A large barb with two pairs of barbels, a weak and articulated last undivided dorsal fin ray, 41-43 scales along lateral line and generally with caudal tinged black.

Description: D 3/9; P 1/15-16; V 1/8-9; A 3/5-6; C 1/17/1; L1 41-43; L.tr 3½-4½; predorsal scales 12-13; gill rakers 20-24. Dorsal and ventral profile more or less equally convex. Length of head 4.60 (4.31-4.97) in total length, 3.56 (3.31-3.82) in standard length, its depth 1.48 (1.40-1.71) and width 1.82 (1.56-2.04) in its length; body depth 5.24 (4.38-6.22) in TL; 4.05 (3.28-4.83) in SL; predorsal distance 2.10 (1.91-2.56), postdorsal distance 1.87 (1.67-2.10), distance from pectoral base to pelvic base 3.84 (3.30-4.40), from pelvic to anal 3.89 (3.40-4.54), length of body cavity 2.05 (1.88-2.33) in SL; dorsal situated midway between snout and caudal base, more towards snout in females, its upper edge concave; postdorsal distance 0.89 (0.73-1.03) in predorsal distance; the last undivided ray is weak and articulated, height of dorsal 4.51 (3.64-5.27) in SL and 1.26 (1.06-1.41) in HL; base of dorsal 1.43 (1.24-1.74) in its height; length of pectoral fin 4.87 (4.22-5.57) in SL and 1.37 (1.20-1.63) in HL; pelvic fin 5.7 (5.11-6.24) in SL; anal fin longer in females and when adpressed extends beyond caudal base, its length 5.23 (3.65-6.37) in SL; caudal 3.44 (2.79-4.55) in SL; depth of caudal peduncle 1.56 (1.13-1.92) in its length. Eye diameter 4.38 (3.1-5.71), length of snout 2.28 (1.97-2.58) and interorbital

width 2.89 (2.42-3.39) in head length. Two pairs of barbels, the maxillary as long as eye, rostral shorter, sensory canal pores in radiating rows under eye in smaller specimens; pelvic axillary scale well developed.

Coloration: Dorsal half of the body greyish, lighter on the sides and beneath; a deep black bar behind the gill opening; the bases of scales above and below the lateral line have dark spots; the tips of caudal tinged black, more prominent in smaller specimens.

Maximum size: 270.0 mm SL.

Variation: With the possible exception of a few specimens from Kerala in which the tail is devoid of black tips, *H. kurali* shows little noticeable geographical variation in external morphological characters. This can be seen from the morphometric data of the three populations, from South Canara (with tail tipped black), Kerala (with tail tipped black) and Kerala (with tail devoid of black tips), given in Table 1. Those characters that are considered to be of basic taxonomic importance, such as the number of barbels, the scale rows along the lateral line, the scale rows between the lateral line and the base of the pelvic, the tuberculated nature of the snout, the nature of the last undivided dorsal ray, the snout length in relation to head length and the postorbital length of head remain quite constant in all the three populations and are therefore considered as different morphs of the species, *H. kurali*.

Remarks: *H. curmuca* and *H. kurali* are closely allied species but have evolved differently in the western and eastern drainages of the Western Ghats. Since *H. kolus* bears the characteristics of *curmuca* described earlier, the former is considered as a junior synonym of *H. curmuca*. *H. curmuca* is found in the Deccan and Mysore plateau in the Krishna, Godavari and Cauvery drainages. Day (1878, p. 573) and Beavan (1877) have recorded it from 'Central Provinces' but the fish does not occur today in Madhya Pradesh. The fish has become less common in the Peninsular rivers probably because of increased turbidity of the waters due to silting as a result of deforestation along the river banks. At

present it occurs in small numbers in the Nagarjunasagar reservoir. *H. kurali* is found in small numbers in the fast flowing hill streams in forested areas in the west flowing rivers of the Western Ghats. *H. kurali* is protected in the Kolathupuzha Temple Sanctuary, Kerala.

Range: INDIA: Dakshin Kannada to Travancore hills, along the western face of Western Ghats.

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ON A NEW SUBSPECIES OF *XANTHOPIMPLA* SAUSSURE (HYMENOPTERA: ICHNEUMONIDAE) IN INDIA¹

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(With a text-figure)

A new sub species of *Xanthopimpla* Saussure (1892), *Xanthopimpla minuta aurangabadensis*, subsp. nov. belonging to Trunca species group from India, collected from India (Maharashtra: Aurangabad) is described and illustrated.

The genus *Xanthopimpla* has been catalogued by Townes, *et al.* (1961). The genus *Xanthopimpla* Saussure (1892) belongs to the tribe Ephialtini of the subfamily Pimplinae (Gupta 1987).

Townes and Chiu (1970) revised the Indo-Australian species of *Xanthopimpla* and provided a reliable key to the species of this genus; the same has been adopted in the present work. Both workers divided the species of *Xanthopimpla* into 22 species groups, of which the following 9 species groups of *Xanthopimpla* so far have been recorded from Maharashtra, India, namely (1) Regina, (2)

Stemmator, (3) Citrina, (4) Cuneata, (5) Nana, (6) Brachycentra, (7) Occidentalis, (8) Punctata and (9) Incompleta. In the present work, another group Trunca has been recorded and a new subspecies, *Xanthopimpla minuta aurangabadensis*, is described.

Xanthopimpla minuta aurangabadensis subsp. nov. (Fig. 1 a-c)

FEMALE: Body length 9.2-9.5 mm (Fig. 1b). Head (Fig. 1a) in front view 0.75 times as long as broad, vertex sparsely punctate; occiput finely punctate, shiny; temple smooth above, sparsely punctate below; ocello-ocular distance equal to their diameter; interocellar distance 0.65-0.70 times the ocello-ocular distance; inner margin of the eye

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